

### Abstract

The object of this invention is to provide a fiber-reinforced concrete cask that ensures easy working, enables reducing working cost, excels in strength, durability and heat resistance and enables minimizing cracking; a process for fabrication of the same; and a supporting frame for molding the concrete cask. In particular, concrete cask (10) formed through injecting and solidification of concrete (11) is characterized in that sheets of reinforcement fibers having a thermal expansion coefficient equal to or lower than that of concrete (11) are provided on at least the outer circumferential surface and the inner circumferential surface of the concrete cask (10) and that the inner circumferential surface of outer sheet (21) and the outer circumferential surface of inner sheet (22) are connected with each other by strings of reinforcement fibers (23). Preferably, carbon fibers are used as the reinforcement fibers.